California GARDEN

NOVEMBER–DECEMBER 1975
Volume 66, Number 6
FIFTY CENTS

EVENTS

November 16, 1975: San Diego-Imperial Counties Iris Fall Show; Majorca Room, open 12:00 noon to 5:00 p.m.; FREE.

December 5, 6, & 7: "Christmas in Fairyland"; San Diego Floral Association Christmas Show; Majorca Room; Friday and Saturday 11:00 a.m. to 4:30 p.m.; Sunday 11:00 a.m. to 4:00 p.m.

MEETINGS

November 25, 1975: Mrs. John Kirkpatrick's Flower Arrangement Class; Room 101, 10:00 a.m.

TOURS

November 15, 1975: Ensenada, Rosarita Beach and Estero; travel down the scenic highway to Ensenada; departs from La Jolla Library at 8:00 a.m. and from Balboa Park at 8:30 a.m. cost $12.00.

THE POINSETTIA plants that are well established close to the house, wall or lot line can be improved by planting an irregular group or a row of *Myrtus communis* or coprosma plants in front, set out at least two to three feet and three or more feet apart. These shrubs stand trimming well as they grow and they will hide the bare stems and heavy trunks of the old poinsettia plants trimmed back in February and looking bare until June.

If new poinsettia plants are being planted, place them at the back of good evergreen shrubs—but allow for ample root development. Old plants have many branches, so some thinning out and transplanting in March will give excellent results.

A generous planting of your own cuttings in the rear yard or garden will give an abundance of flowers for cutting and save those in the front as long as the season lasts. Everyone enjoys using this flower generously—so grow them more abundantly each year.

—K. O. SESSIONS

Reprinted from CALIFORNIA GARDEN April, 1938 (Volume 29, Number 9).

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION:
1. California Garden. 2. Filed on September 7, 1975. 3. Issued bi-monthly 3a. $3.00 4. Publication Office: Casa del Prado, Floral Association, Balboa Park, San Diego, California 92101. 5. same. 6. Publisher: San Diego Floral Association; Editor: Craig W. Silgjord, Casa del Prado, Balboa Park, San Diego, California 92101. 7. San Diego Floral Association. 8. none. 9. — 10. not changed during preceding 12 months. 11. (a) 3,237–3,100 (b-1) 366–167 (b-2) 2,451–2,467 (c) 2,817 – 2,627 (d) 130–154 (e) 2,947–2,781 (f-1) 290–319 (f-2) -0- (g) 3,237–3,100

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California GARDEN

Published Since 1909 by the SAN DIEGO FLORAL ASSOCIATION
Casa del Prado, Balboa Park, San Diego, California 92101
Monday through Friday
232–5762

VOLUME 66, NUMBER 6

ABOUT THE COVER

Our front and back cover were created by Ilsa Scheer, a free-lance artist who has created other covers for us this year.

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POSTMASTER: SEND FORM 3579 TO:
CALIFORNIA GARDEN, CASA DEL PRADO, SAN DIEGO, CA 92101

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PRUNING DECIDUOUS TREES

by GEORGE JAMES

DECIDUOUS FRUIT bearing trees, those that loose their leaves in the winter, bear better quality and more uniform sized crops of fruit if they are pruned each year. While the tree is young the pruning is directed towards the development of a strong system of trunk and branches, and when the tree reaches maturity, it is pruned to conserve and strengthen the system of branches and to regulate the production of the fruit crop. The information given here deals only with the regulation of the fruit crop on mature trees.

Deciduous fruit trees are pruned while they are dormant, out of leaf, because it is easy while they are in the condition to identify the growth that is to be removed. This doesn't mean that these trees cannot be lightly pruned during the season they are in leaf, should this be necessary.

Apricot, plumcot, peach, plum, prune and nectarine trees need the most pruning. Peach and nectarine bear their fruit on shoots which must be renewed each year, while the others bear some of their fruit on annual shoots and the rest of the crop on spurs. Spurs are short growths, usually less than six inches, which bear fruit for several years, and are found growing from larger branches. The fruit bearing potential of an annual shoot is indicated by the number of buds at each joint on the shoot, and which are easily seen during the dormant period. If there is one bud at a joint, it will be a leaf bud, and where there is more than one, one will be a leaf bud and the remainder will be flower buds, which will produce the fruit.

The following steps in pruning are listed and described to guide the gardener in the pruning of the deciduous trees, and it is suggested that the steps be performed in the sequence listed and each step completed for the entire tree before the next step is started. In years to come, after the basics of pruning are firmly commited to mind, the pruner can combine all the steps so that it will be necessary to go around the tree only once.

STEP 1: Remove any dead or damaged growth. Growth may be dead from disease, insect damage, lack of light or broken by the weight of the previous crop.

STEP 2: Remove barren wood. Barren wood are shoots that produced the crop the past year, and will not bear again, except, that there may be a section of new growth at the tip that will have flower buds on it. If there is a normal crop of new shoots, this partially barren wood can be cut out.

STEP 3: Cut back the top of the tree to a convenient height. Trees that are allowed to grow tall, or to spread widely, may not produce a larger crop because the interior of the tree may be so shaded that fruit will not be produced there. A convenient height is one which allows pruning, picking of fruit, and spraying to be done with ease.

STEP 4: Thin out the top of the tree so light can reach the interior. Reduce the growth, but leave some to cast a light shade on the branches below. If there is little or no new growth in the center, or if the growth there does not have flower buds on it, the interior of the tree is too dark and should be thinned as has been described.

STEP 5: Remove water sprouts or suckers. These are vigorous shoots that usually bear little or no fruit and result from too heavy a pruning the previous season, over fertilization or too liberal an irrigation program during the growing season. This kind of growth can be used to fill voids in the structure of the tree or to replace weak branches, otherwise they are cut off at their point of orgin.

STEP 6: Remove Tent Catapillar nests. These are clusters of leaves that have been fastened together in a ball-like mass by web-like threads and are used by certain catapillars as a place to pupate. They are so well constructed that spray material will not penetrate them so the catapillars

spending the winter in the nest will emerge unharmed the next spring to continue their desturctive feeding.

STEP 7: Prune to balance the tree and remove any low growing branches which would interfere with other garden operations, or would allow fruit to touch the ground.

STEP 8: Reduce fruit crop potential by pruning off some of the shoots that would bear the crop the following season. The most important benefit that results from pruning is the creation of a balance which allows a reasonable crop of fruit to develop and allows at the same time the growth of shoots to bear the crop the following year. Trees that are unpruned are likely to bear a large crop one year then a small crop the following year because the first year the tree was not able to grow the fruiting shoots needed to produce the second year's crop.

The gardener will need to use judgement in deciding how much growth with a fruit bearing potential to cut out. It will help if he can visualize the fruit bearing wood with the crop on it. If it appears that the crop would be so large that the size of the fruit would be reduced or the branches might be broken, or the production of the crop would prevent the tree from growing the fruiting wood for the next crop, then some thinning of the fruiting wood is needed. The weakest shoots can be cut out entirely; the strong, slender shoots that would be broken by the weight of the mature fruit can be shortened; partially barren shoots, as described in STEP 2, can be cut out to reduce the crop potential.

Inexperienced pruners are likely to leave too much fruiting wood, and if they will watch their trees as the crop develops, they will have a better understanding of how much to leave in future years.

The directions that have been given are for the pruning of the standard size fruit trees. There are dwarf trees of some kinds of fruit available, and these are pruned the same as has been described except that dwarf trees need much less pruning. Flowering or ornamental varieties of peach, apricot and plum and the fruiting-flowering varieties, such as Alma Stultz Nectarine, Red Leaved Plum varieties, and Saturn or other varieties of peaches which are grown for both their fruit and flowers, are pruned AFTER they have finished flowering. This allows the enjoyment of the beauty of the flowers and the use of the fruit crop while the tree is encouraged to bear consistently.

Other varieties of deciduous fruit trees are also pruned during the dormant season, but in most cases need less or somewhat different pruning than those discussed so far.

APPLES produce their fruit on spurs which remain productive for many years; some varieties also bear fruit on the tips of branches which grew the past year. Pruning apple trees consists of removing dead or weak wood and the thinning of new growth to encourage the development of spurs on mature branches. An apple tree that produces a large crop of small fruit will have larger fruit the next year if the tree is thinned, while a tree that has a small crop and pruduces many new shoots, should be pruned lightly or not at all until the vegetative growth slows down.

ALMONDS bear most of their crop on spurs which have a productive life of about five years. A small amount of fruit is produced on annual shoots. Almonds are pruned by cutting out about one-fifth of the branches that are one and a half to two inches in diameter. This will allow the tree to grow new branches with new spurs on them. No more than one-fifth of the branches should be cut out at any one pruning as heavier pruning may cause water sprouts or suckers to grow and these will not bear fruit.

FIGS bear two crops of fruit a year. The first crop is formed at the tips of the branches, on the past season's growth, and the second crop comes on the new growth that is formed beyond where the first crop is being developed. If a fig is pruned, the tips which bear the first crop are cut off, so the first crop is lost. However, such a pruning will stimulate the development of a second crop which will have fruit of a larger size and better quality than otherwise. Quite often the only pruning given to figs is to cut out dead or crowded growth, and to cut off branches which reach to the ground.

PERSIMMONS bear their fruit on current growth—a shoot made in the spring will bear fruit the following fall. New growth is usually made at the outer ends of branches, and if trees are allowed to grow unchecked they will become larger and will bear fruit on the outer ends of the branches.

Pruning consists of thinning out the center of the tree, removing thin growth that would produce poorly, and cutting back branches to laterals. Prune moderately, as heavy pruning could stimulate excessive growth and a small crop the following year.

PEARS are similar to apples in their fruit bearing, the fruit of both being produced on spurs which have a long productive life. Mature trees need little pruning other than a light thinning to maintain a strong branch structure and promote the development of strong new growth with new spurs.

Pruning cuts that are smooth will heal quicker than those that are rough, or where the wood has been split or the bark bruised. Therefore, an assortment of good pruning tools will make the job easier and will leave smoother cuts which will heal quickly. Among these pruning tools, you should have the following: hand shears for cutting twigs and small branches; loppers (larger shears which have handles up to 24 inches in length for increased leverage) for cutting through medium size branches with ease; a pruning saw for the removal of larger branches.

In pruning, the word "stub" is used to describe the portion of a branch remaining after the cut has been made and is long enough to hang a hat on. Cuts should be made so stubs are not left. Stubs prevent wounds from healing completely and the unhealed portion of the wound can provide an entryway for insects and diseases to penetrate the tissue of the tree.

All pruning cuts that are about one inch in diameter or larger, should be sealed with pruning compound. This reduces the possibility of dehydration and prevents the entry of insects or diseases. Pruning compound is a material that is specially formulated for this purpose and it will not damage the tender tissue exposed in the cut area as house paints or other materials could. Cuts should be "repainted" when the compound starts to crack and this protection should continue until the bark has completely grown over the cut.

This brief discussion of pruning has been focused toward the more common deciduous fruit trees. There is much more to proper pruning than can be covered here and a person who is interested in delving deeper into the subject will find the SUNSET PRUNING HANDBOOK by Roy L. Hudson, published by Lane Publishing a good source of additional information. This book is moderately priced, available at many garden and book stores, and deals with the pruning of ornamental shrubs and trees as well as the fruit bearing trees. □

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'CHRISTMATIZE' YOUR PLANTS!

by SKIPPER COPE

YOU SAY you don't have room for a Christmas tree? Then decorate your house plants instead! Put one on an entry table, the coffee table or on the dining table. Use a hanging basket on the patio or in the living room. The possibilities for decorating are almost endless, and unlike cut flowers, you will have a colorful decoration that will stay fresh until after New Years.

Shown here are some examples. A Hoya with streamers of red velvet ribbon caught in loops with gold Christmas ornaments is eye-catching. Gold paper covers the plastic pot.

The flowered plant is a *Dipladenia splendens*. The three basket wires are covered by green velvet ribbon held in place with a double strand of silver bead garlands. The large Christmas ball is covered with sequins. A green bow and silver ornament finish the top. Silver paper covers the pot.

Our cover artist for this issue, Elsa Scheer, has drawn a hanging basket—another *Dipladenia splendens*. The hangers are wrapped with olive green velvet ribbon; a lovely matching green and gold bird hides the hook. The plant is decorated with gold and pink Christmas ornaments and the pot covered with gold paper.

The pots can be decorated with gold braid, velvet and paints as an alternative to using just colored paper. Do anything that appeals to you! Just let your imagination soar and you can have plants that outshine the holiday season! □

walker scott

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GOURDS ARE BACK

by ROSALIE GARCIA

MOST OF US who remember life on the farm remember the gourd dipper at the well and the smooth, white darning "egg" in Grandmother's sewing basket. Today we see some of the colorful, warty, striped gourds in our supermarkets only during the fall months. But are gourds coming back into style? Good evidence is provided by Mr. W. F. Bradley, known locally as the "gourd man", who has thousands of gourds piled all around his place in National City. His customers come in a constant stream, sorting through the gourds and carrying off boxes of them to make lamp bases, containers, musical instruments, toys, bird houses, masks and accessories for floral arrangements. Mr. Bradley's gourds come from a commercial grower in Fallbrook, who also supplies markets in Los Angeles and the Imperial Valley.

But what about the city gardener on his small lot? Mostly his space is used for what he considers more edible plants. Gourds, as we know them, are vining plants that take up a lot of space. Any vine will grow ten feet, and some varieites will take off from there to possibly 800 feet, ruling out the gourd for a small lot, unless it is planted along a fence, a pergola, or trellis. Anchored in a basket of soil, a vine can drape down a canyon. The rounded, lobed leaves and dainty tendrils aid in tropical effects in any location. And of course, the colorful, odd-shaped fruits are interesting and decorative.

Enough people are interested in gourds to have formed local and international gourd societies which publish magazines and newsletters full of ideas on what to do with gourds. The classic book on gourds was written by the great botanist Liberty Hyde Bailey. It is entitled THE GARDEN OF GOURDS and can be found in various libraries. Since gourds grow in all parts of the temperate and tropical worlds, botanists take a great interest in them. They still argue about the country of origin, but since gourds are definitely warm weather plants, the tropics would seem to be their native home. Primitive peoples of the tropics used gourds as containers long before they made pottery, and even today gourds are used for this purpose in parts of Africa and the South Sea Islands. Another early use of gourds was for musical instruments, such as those still made by Mexican neighbors whose ratchety sounds come from the shaking of gourds with the seeds loose inside, or from scratching a comb over ridges cut in a large gourd.

Our pumpkins, squashes, cucumbers, and melons are very likely descended from the wild gourds which still flourish in many parts of the world. A gourd is distinguished from a vegetable as a hard-shelled, durable fruit grown for use as an ornament or utensil, or for general interest. We do not consider gourds edible, being too bitter for our cultivated tastes, but in many parts of the tropics the young fruits are eaten. All gourds belong to the *Cucurbitaceae* family, whose 90 genera include more than 700 species. These plants are so easy to hybridize that nature will do it for us, so one must never plant two varieties of gourds near each other, or they will mix with no telling what result. Flowers are either male or female and are found on the same plant in most varieties. The male flower grows on a stem, but the female grows out of the undeveloped fruit, making it easy to tell them apart. There are always more male flowers, which are considered a great delicacy when fried in batter.

Most of the gourds we know and use come from three genera. The best source of seed I know is Park Seed of Greenwood, South Carolina. Park's spring catalog lists and illustrates large and small gourds of the three genera. In southern California, gourd seeds should be planted from April to June (perhaps earlier in warm valleys) in good garden soil about ten feet apart, either in open ground or along fences or arbors. Placing part of a milk carton around the seed hill will give protection where nights are cold. Because the plants form lenghty and often deep root systems,

deep watering is a must.

Since most gourds are annuals, the vines begin to yellow or mildew along in September or October. Allow the fruits to remain in place until the stem has dried. Put the gourds in a dry place until the shells are hard and tough. A hole may then be punched in the stem end and the seeds removed. Mr. Bradley piles his thousands of gourds outside in all kinds of weather. They become dark, spotted, and moldy, but all this can be taken off with fine sandpaper and the shell may be polished or painted according to its use or decorative purpose.

Most of Mr. Bradley's gourds are of the *Lagenaria* genus, commonly known as dipper, bottle, dolphin, penguin, serpent, Turk's turban, or cave man's club, depending on the shape. Because of their endless variation they are amenable to decoration as animal or bird figures, or as containers. Their tough and durable shells give these gourds a permanence that make them the most popular of all. The *Lagenarias* are also the easiest of all to grow, bearing white flowers on vigorous stems. The smaller, warty or smooth brilliantly colored and striped gourds are not so long-lasting but are decorative and interesting. This yellow-flowered species, *Cucurbita pepo*, is close kin to the pumpkins and winter squashes. Many of the smooth ones are shaped like apples and pears and are so named. Their ancestor could be the wild gourd of Texas, distinctive enough to be given the name *Cucurbita Texana.*

Another variety, being seen again in drug stores and in Tijuana, is the luffa or loofa, the vegetable sponge or dish rag gourd. The dried pulp of the long, striped fruit is used in bathrooms for a tingling rubdown. It can be rinsed, dried, and used over and over just like the natural loofa sponge which it resembles. Maybe the plastic and metal Chore Girls have largely supplanted the dish rag gourd for scrubbing pots and pans, but this gourd used to be the best one could get. It may also be used to polish the surface of other gourds. The loofa is definitely tropical and needs plenty of warmth, so put it in a protected spot.

One of the real curiosities of the gourd family is the serpent or plain old snake gourd, *Trichocanthes anguina*. This gourd is long and slim and prone to growing in contorted shapes. Mrs. Merritt England, a California flower arranger, displayed a most spectacular one which I saw at the National Garden Club convention in Salt Lake City this year. She had mounted this "sculpture" in plant material, a gourd of at least ten feet in length which had grown into a balanced intricate design, both pleasing and unique. Whether it was trained, as is possible with gourds, I don't know; but it was an object of art—the ultimate in what a gourd can be. □

FOR LOVE OF RARE TREES

by ALICE M. CLARK

TODAY IT IS hard to find a home, especially in La Jolla, that has been occupied by the same family continuously for forty-eight years. Walter Ames and his wife moved onto three-quarters of an acre at 7740 Hillside Drive in 1927. Nine years ago they scraped their original house and built a new one with an oriental flavor to match the source of so many of the trees that had been growing there under the special care and concerned guidance of Marguerite Roberts Ames.

When Mr. Ames settled in La Jolla, it could have been said that he had a horticultural background. He worked in the Armstrong Nursery in Ontario to earn money to puruse his law studies at Stanford. At that time there was excitement over the introduction of new plants from tropical areas. Those early contacts probably made him indulgent of his wife's garden obsessions while business claimed his attention.

As with most young families there was little money to spare but Marguerite knew what she wanted for the garden—usually the costly and rare. She bided her time and, in one instance, raised pelargoniums to the blooming stage and then exchanged them in a nursery for a new tree she had set her heart on having. While raising a family and keeping up with a busy husband, Mrs. Ames quietly pursued her hobby. She kept in close touch with the Evans and Reeves Nursery in Brentwood where she could see the full-grown trees of the kind she wanted from the Orient, South America and Africa. Some of the specimens in her garden, now in their full glory, are only beginning to be found in local nurseries.

The most expansive tree in the inside area of the Ames garden (and one of the oldest) is *Koelreutaria bipinata*, introduced from China in the eighteenth century. It merits a top rating, not for its rarity, but as an example of outstanding beauty in full growth. Soaring and spreading over a wide space, the gray trunks, bare-limbed in winter, are clothed in graceful bipinnate leaflets when the weather warms up. Then its towering branches give an illusion of great depth, height and seclusion, while acting as a windbreak and shelter for camellias, azaleas, hydrangeas, rosy-flowered tree begonias, Lenten roses, aralias, ferns and other shade plants. They thrive because the tree roots go deep down below them. Delicate yellow panicles of fall bloom, held high above the leaves, are not very noticeable but later they are bent down with the weight of their fabulous orange-red bladder-like capsules, which is why they are called the Chinese Flame Tree. The botanical name honored a German professor. When in full leaf, the growth of this tree is so overwhelming that is is no wonder Walter Ames claims it as his favorite.

On the west side of the house, high on the hill, like a beacon to other trees below it, is a *Chorisea speciosa*. the tallest of the Ames collection. Dormant in winter, the summer foliage of this handsome Brazilian species is gracefully divided into five pointed leaflets. When these are shedding, in late fall, many clusters of fantastic quintets of cerise-pink petals with creamy brown splashed centers and long-tongued pistils seem to float among the bare branches as they soar above the roof-top through December. The inch long spikes on the lower part of the smooth gray tree trunk seem to be protecting the beauty overhead. In its native land it might also be guarding its owner's profits, as the seed pods, which develop here, are a valuable source of kapok—hence the name Silk Floss Tree. With a twinkle in her eye, Marguerite opines that some of the credit for the tree's amazing growth might be due to its site over an old time Chic Sale.

A Chinese tree to dream on is *Ginko biloba*. Found in fossil beds, it was reported to European botanists in 1600, but introduced much later. In the spring its bare branches are transformed with delicate feathery light-green leaves that develop a fan shape as they grow, so it is often called the

Chorisea speciosa bloom.

Maidenhair Tree. Its early flowers are inconspicuous. Fall finds the foliage a long holding blaze of golden glory that also covers the earth below. Marguerite has several ginkos, one a dwarf echo in a blue Chinese pot on the patio. These lacy trees are available and easy to grow. They should be used more often.

In the deciduous catagory with the ginko, but growing on the island of plants in front of the entrance drive is one of Mrs. Ames' new Japanese imports, *Cercidiphyllum japonicum*. It has dainty intriguing heart-shaped leaf forms that begin in purplish-red tones, turn deep green and then become yellow in autumn. Most of us find its oriental name, Katsura, much easier to say and remember. An older tree from China, *Sapium sebiferum*, is nearby. When its green leaves break out in the spring they are small like the Katsura but with the pointed pattern of poplars. They flutter and whisper through the summer and then gain fame for their stunning red fall color. The flowers are inconspicuous but the wax coating on the small fruits, which is used commercially in its native land, has given it the designation of Chinese Tallow Tree.

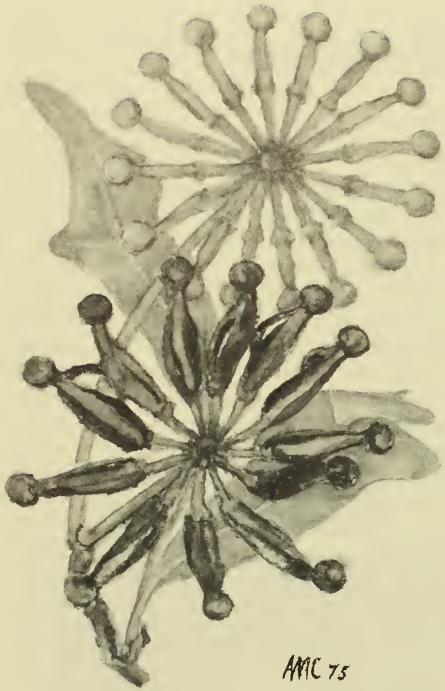
Another oriental delight is *Sophora japonica*, the Pagoda or Chinese Scholar Tree, so called for its associatjon with monasteries. It holds a position of honor on the corner of the Ames patio. There it also stands guard over a potted dwarf specimen of the same variety, one of Marguerite's extravagant investments. After a leafless winter it progresses to long rich green pinnate foliage. From July to September creamy white, pea-like blossoms appear in panicles that later turn to pods with waistlines between the seeds. Scheduled to flower in thirty years, this one made it in eight, probably due to its warm sheltered location. It is a fine choice to shade a lawn as it can take water and is usually pest free.

Off the patio, below the Sophora, steps lead down to the barbecue area. There, to mark the way, is a bushy holly tree, at least fifteen feet tall. It is a fine dark garden accent and a joy for holiday arrangements because the beautiful long sprays are studded with red berries. Best of all, the shining oblong three-inch leaves of this Ilex have only a few spines at the tips.

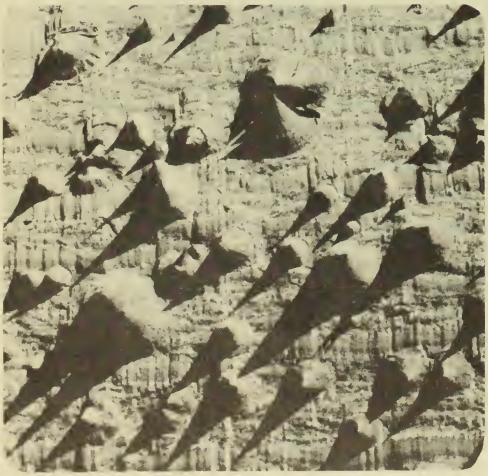
Outside the Ames garage is a stately *Podocarpus elongata*, often called the Fern Pine—not for its needles but for its fluff of fine leaves. The seeds were sent to California by a member of Theodore Roosevelt's East African hunting trip. Kate Sessions introduced the tree here. One thrives in Rosecroft Begonia Gardens on Point Loma. Another can be seen on the northwest corner of First and Juniper in San Diego, the is left of the lovely Wagenheim garden. This tree is a favorite here because of its graceful narrow leaves and the fact that it is evergreen, pest free and clean. It will grow almost anywhere but does need part shade in warm areas. It is good in pots or used as an espalier. The variety, *P. gracilior* is bushier but slow to become a tree.

Marguerite feels that those who want leafy trees all year round should take a good look at one of her Australian prizes, *Stenocarpus sinuatus*, located close to the patio. Leaves on the young trees are bright green enlargements of oak foliage but later they become elongated, dark, slender, shining and often so thick it is hard to see the blossoms. They do not appear until the tree is well-established. In the Ames garden the blossoms may appear any time though fall is best. When one sees a close-up of its spectacular flowers, it is understood why the names Firewheel or Rotary Tree are appropriate. The hub of the wheel is formed by half-inch long stemlets attached to a center. From each of these emerge four orange-red inch and a quarter long strap-like petals that harbor the pistil in the middle. All five parts are joined together, like a parachute, with a gold-red ball at the end which opens when the petals fall. Imagine a three inch circle of ten to twenty of these wheel spokes all rimmed with golden balls. Surely no other inflorescence was ever so colorful or so fantastically wrought—like a product of modern stitchery. Tender when young and slow growing, this tree is an unfailing source of pleasure to all who own one. It will even thrive on a lawn in a small yard because it likes moisture and the roots go deep.

For gardeners interested in unusual trees, this article has described those Mrs. Ames feels are at their best this season. Those that are most interesting in early summer will be featured in a later issue. She hopes that after reading about these rare trees more growers will try them. □



Flower and bud of *Stenocarpus sinuatus.*



ABOVE: Thorns on trunk of Chorisea tree.
Photo by Bill Gunther.

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EPIPHYTE OR PARASITE?

by HELEN WITHAM

A STAGHORN fern grows on the trunk of a palm. Is it a parasite? No. An epiphyllum perhces on the limb of an oak in your garden (because someone placed it there and anchored it). It is not a parasite. But how about that mistletoe on the branch of an oak near Julian? Now, that one is a parasite; it couldn't survive on its own.

The word "plant" usually brings to mind a structure consisting of a stem with leaves and perhaps flowers or fruit, growing from an underground root system which serves to hold the plant in place and to transport water and minerals to the main plant body. Its predominant color is green—the green of chlorophyll. With most land plants that's the way life is. The water drawn from the roots up into the leaves is combined with carbon dioxide from air to produce the carbohydrates needed for growth. The chlorophyll is the food-making part of the plant, and most green plants make their own food.

But, certain groups of plants, including the epiphytes and parasites, do not follow the usual plant design for living. They are out of the mainstream in some conspicuous way. An epiphyte is a green plant that is ordinary in that it sustains itself, but is unusual in not being rooted in the earth—it can live out on a limb or on a rock or elsewhere above ground.

A parasite, on the other hand, is dependent upon a host plant for all or part of its sustenance and can not live independently. It fastens itself to its host by means of root-like structures which penetrate the tissues of the host and draw nutrients therefrom. Most plant diseases—the rusts, smuts, mildews and blights that take a tremendous toll of cultivated crops as well as wild plants—are caused by parasitic fungi or bacteria. However, there are some well-known and conspicuous parasites among the flowering plants, mistletoes and dodders for example.

Dodders are those yellow to orange masses of threadlike stems seen on grasses, herbs, shrubs, or trees, from coast to desert. Their seldom-noticed flowers are pearly white, appearing in summer.

Mistletoes vary in color from green to yellow or reddish. They have some chlorophyll, therefore some food-making capability, but are dependent upon their hosts for water and whatever minerals they require. Probably the most familiar mistletoe in our area is the Oak Mistletoe with its brownish-green leaves and whitish berries. A similar species is seen on willow, cottonwood, walnut and sycamore trees. On our desert the Mesquite Mistletoe is conspicuous for its reddish stems and masses of shiny coral berries. Those berries are the principal food of that handsome desert bird, the phainopepla.

A parasite may attack the above ground parts of a plant, as mistletoe on tree branches or dodder on stems and leaves of smaller plants, or it may attack the root system. An example of a root parasite is the Paint Brush that splashes bright red along roadsides cut through the brushlands. Although a Paint Brush doesn't LOOK parasitic, having green leaves and no apparent attachment to another plant, it is so, and there's no use trying to transplant or grow it from seed.

Plants that are wholly parasitic on roots tend to be white, yellow, brown or purple. The odd fleshy desert plant called "Sandfood" is a root parasite. So are the Broom-Rapes, one of which has recently become a serious pest in tomato fields.

Now as to epiphytes. There's that staghorn on the palm tree, the orchid on a post in the greenhouse and, in the Southeast, the "moss" that hangs from trees and even telephone wires. Those plants don't derive any sustenance from the tree or the post or the wire; they are simply homesteading there.

The word epiphyte comes from Greek *epi,* meaning upon, and *phyton,* meaning plant. Hence an epiphyte is a plant perched upon something—another plant, a rock or a fence. It is an ordinary

green plant that takes care of its own nutritional needs, but is extraordinary in not being earth bound. An epiphyte is not a kind of plant in the sense that a fern or a cactus is. In fact, there are many epiphytic ferns and some epiphytic cacti, epiphyllums (there's "epi" again) and rhipsalis for example. Many orchids, mosses, ferns, liverworts and lichens are epiphytes, a fact well-known to owners of greenhouses, where little green things keep popping out of the woodwork or the bricks.

This growth habit has contributed to the current popularity of bromeliads, since their space requirements are more easily met than are those of plants in heavy or bulky containers. Most of the aechmeas, billbergias, dyckias, cryptanthas and tillandsias presently hanging on room dividers or patio walls are epiphytes. □

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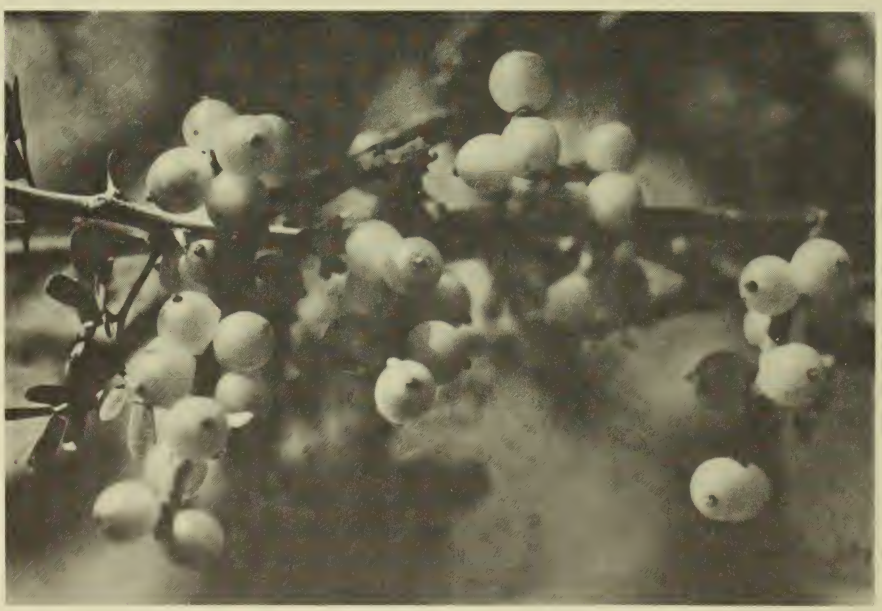

ABOVE: Desert Mistletoe (*Phoradendron californicum*) growing on Ironwood in Tajo Canyon, eastern slope of the Sierra Juarez in Baja California. According to Dr. Edmund C. Jaeger, the white-to-orange berries are a source of both food and water for birds of the desert, and they, in turn distribute the mistletoe seeds.
Photo by Betty Mackintosh.

FOR CHRISTMAS

Photos by Betty Mackintosh.

PICTURED HERE ARE A FEW ARRANGEMENTS FEATURED AT LAST YEAR'S SAN DIEGO FLORAL CHRISTMAS SHOW'

They should offer suggestions for holiday arrangements using accessories and long lasting fresh material. Among these are pine branches with white Chrysanthemums and white candles in brass container and candlesticks from India—arrangement created by Mrs. Dixon Arnold.

A ceramic angel with pine branches placed on a piece of weathered wood—arrangement created by Mrs. Patrick Kennedy.

Berried holly branches against an embossed brass plate with low square red candle—arrangement created by Mrs. J. R. Kirkpatrick. (Opposite page).

Roses, pine branches and white ceramic bears also on the opposite page—arrangement created by Mrs. J. R. Kirkpatrick.

CHRISTMAS TREE MEMORIES

by JOSEPHINE GRAY

AT CHRISTMAS, if there is a little crack in Time through which you can slip, sit with your hands quietly in your lap and let your eyes seek the horizon and remember all the Christmas trees you have known, then the far away and long ago will come close and near. When you were little all the trees seemed tall and glorious, winking their lights to make the frost ropes shine and the chinking ornaments glitter. Many many trees pass through your mind with gaily wrapped packages under the wide lower branches, and as clear as today come almost forgotten voices singing out scraps of gleeful nonsense, and familiar loving faces bright with joy come into focus.

But not all Christmas trees were tall firs and some Christmas times were lonely and far from home. I remember a bitter wind dancing down a Shanghai street as I searched for some kind of green thing that might do for a Christmas tree. The shop windows were full of things in Christmas colors—scarlet chests, brilliant emerald robes, delicate white tea sets, but in the infrequent florist shops and flower stalls not a thing that resembled Christmas. The florists showed me huge and elaborate baskets of roses and chrysanthemems all looking as though they had been mathematically arranged, not one flower head higher than another, not one petal's breadth between them—a perfect floral pudding. But no trees, only bundles of red-brown switches which would magically turn into branches of plum blossom if left in a jar of warm water for a few weeks.

In the late afternoon, cold, discouraged and homesick, I stumbled into a shop in which there were nothing but trees; not tall Christmas trees, but small twisted and contorted trees growing in beautiful porcelain containers. In my naivete, I knew nothing about bonsai, but was fascinated by their strange and grotesque beauty. The little man at the back of the shop left his tea and hurried to help me. How I should have liked some of that hot tea! He led me from one to another, lovingly bending over each one, touching a leaf here and there with a delicate finger. We looked at tiny oaks and crimson maples just beginning to drop their leaves for the winter and wandered through an unbelievable forest of miniature evergreens from which I finally chose an unbelievable pine tree. This little tree in its celadon green pot with a swatch of holly from a home-side package on the table beside it, was the symbol of Christmas in a barren hotel room.

A very slim Christmas, this one in a depression year, and yet one of the happiest in the whole long string. We walked along snowy streets in a big city and gazed at magnificent trees in the shop windows overladen with ornaments and surrounded by luxuries we scarcely dreamed existed. We shopped lavishly from those windows giving each other watches and earrings, dressing gowns and coats, books and music and finally ended up in a dime store to buy a handfull of candy canes. Someplace along the aisles piled high on either side with toys and colored ornaments, there came a scent of Lavender. I followed my nose to a counter heaped with sachets no bigger than the breadth of my two thumbs, lavender gauze filled with Lavender buds—this was what I wanted for Christmas, a lap full of Lavender!

We had agreed to have no tree, each to give the other a book and to have our Christmas dinner at Mama Guider's. She was the proprietor of a little German bakery around the corner, but she also had three small booths along one side of the shop where several nights a week she would serve dinner. Here on Christmas Eve we came in from a storm to the warmth and fragrance and cheer. And, what cheer and fragrance she offered. Mama Guider, warm and brown as one of her own buns, was there roasting something that sent out drifts of what ought to be bottled and sold as Holiday Essence. It was goose, and the nearest I'd ever come to goose before was in Dickens. As Alexander Woollcott would have said, "It was a feast as ever

was with all the fixings". It has been so long, I can't remember what they all were, but we staggered out with the hot mince pie we couldn't eat, carefully wrapped in waxed paper to have with our breakfast coffee.

The storm continued all night and by morning the snow was almost level with the window sill. The wide sill was my garden then—two little pots of philodendron and a leggy geranium with a solitary red blossom. On the way to the kitchen to make coffee, the fragrance of Lavender stopped me. The gangly little geranium had turned into a Christmas tree during the night and every leaf and branch was hung with a tiny aromatic ornament!

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HEIRLOOM DECORATIONS

by ADRIENNE GREEN

HOW WOULD you like to create Christmas decorations which can last for generations? Designs made of seed pods and cones will last indefinitely with reasonable care.

First, select dried materials of excellent quality. Gather seed pods and cones as soon as they are mature, just before they fall or soon afterward.

The large wreath pictured is made on a single wire frame. All of the cones and seed pods are individually wired, using number 25 guage wire. Each wire stem is covered with floral tape. Groups of wired and taped material are wired to the circular frame. The wreath is sprayed with gold before adding the moss green satin ribbon. Used alone or against a fresh green wreath, this decoration is a handsome everlasting Christmas heirloom.

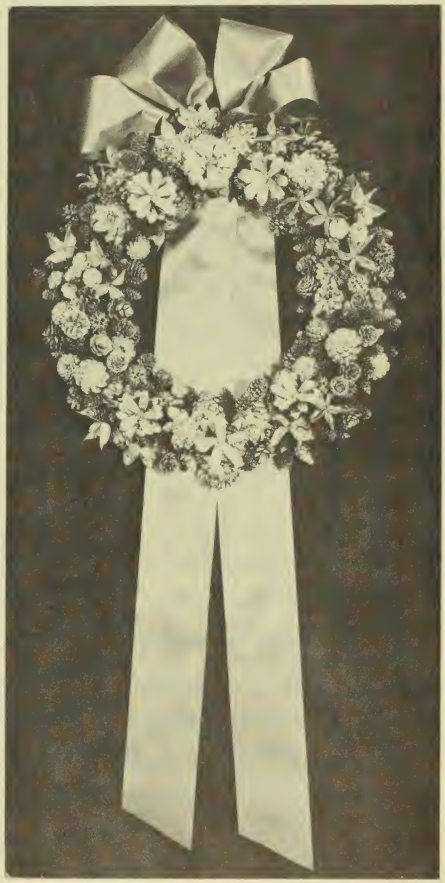
The "open" tree pictured consists of a number of wired and taped cones all the same kind. The wires are of different lengths, held together and shaped into a tree. The stems are wired and taped as a "trunk" and grow out of a clay pot filled with plaster of Paris. Gold spray masks the brown floral tape and gives a jewel-like quality to the cones. Brightly colored feather birds among the branches offer pleasing contrast. Only about twelve inches tall, this delightful decoration can be tucked away for months and brought out to be enjoyed every December.

Materials needed for the stylized cone tree pictured here include: a clay pot, a styrofoam pyramid which just fits the pot top, burlap to cover the styrofoam, two kinds of cones, number 24 gauge wire.

White styrofoam is an unattractive background for brown cones. The styrofoam cone should be covered with burlap. The burlap is cut into a pie shaped piece to fit the pyramid. It is pinned in place with hairpins made from bending small lengths of wire. The base of the styrofoam is glued to the rim of the pot. Cones are wired and the wire ends (an inch or two in length) are inserted through the holes in the burlap into the styrofoam.

The red feather cardinals and the moss green velvet ribbon add an elegant touch to this beautiful cone tree. □

Photos by Betty Mackintosh.



Christmas Cactus by Sally Bancroft S.J.B.

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ORCHIDOLOGY

by BEN HARDY

–Part Two–

DELVING TOO deeply into the Orchid Family is not the intent of this series. With the hope that my first article (May-June 1975) wet your appetite for a better understanding of orchids, I would like now to touch briefly on the more prominent genera in the family.

CATTLEYA Ldl. (CAT-lee-uh): This group is undoubtedly the best known of the Orchid Family. Usually when someone says "orchid" this is the flamboyant flower that first comes to mind. Most florists stock these in white and lavender, but they come in a tremendous variety of colors–white with purple lip, yellow, yellow with lavender or red lip, apricot, pale green, green with red lip, buff with amethyst spots. Most bloom once each year on new growth. They have from a single large bloom on a stem to as many as thirty small or medium size blooms to a stem. These are strictly a New World plant, the species coming from Central and South America. The group is epiphytic.

CYMBIDIUM Sw. (sim-BID-ee-um): Here in San Diego this orchid is probably as well-known as the *Cattleya*. The species of this family originated primarily in the Asian land mass of China, Indochina, with the Himalayan section of India and Burma being the habitat of the more commonly seen plants. In nature these plants are found grow- as epiphytes, terrestrials, or lithophytes, but in cultivation are grown mostly as terrestrials. They grow very readily in the outdoors here in San Diego. This group also has a tremendous color range available and comes close to rivaling some of the colors in the *Cattleyas*. These flowers are of a much heavier texture and last for a long time as cut flowers. They are particularly long lasting on the plant, usually remaining from two to three months. They begin blooming in November and continue on into May providing a splash of good color for the winter months. The standard *Cymbidiums* are slowly being nudged out of their prominence by the smaller and more compact, charming miniature *Cymbidiums*, allowing more plants per growing area.

EPIDENDRUM L. (epi-DEN-drum): Another New World genus that ranges all the way from North Carolina down through the Caribbean Islands, Central Mexico and down into Brazil and Argentina. Along with being a very large group, the plants have many varieties of vegetative growth. The reed stem epis (epidendrums) are quite often found in many nurseries in the San Diego area. Their flowers resemble miniature *Cattleyas* and form a large cluster on a long spike. These plants vary in size from a foot high to over ten feet tall. Another group form small pseudo-bulbs and grow much smaller than the reed stem epis. Most flowers in this group are small, but attractive. There is even one epi in this group that looks vegetative like a *Cattleya* until it blooms–*Epidendrum ciliare*. Another plant, *Epidendrum cochleatum*, is strikingly unusual with a deep, deep purple lip so dark it almost looks black, giving rise to its common name of Black Orchid.

DENDROBIUM Sw. (den-DROBE-ee-um): Here we have the largest genus (estimated at 1600 species) of the Orchid Family that also covers the largest area of the globe. They range from the west coast of India all the way to the Marquesas Islands in the Eastern Pacific Ocean and from Korea and Japan in the north to the Southern coasts of New Zealand and Australia, with temperature ranges from snowy mountain regions to steamy hot jungles at sea level. They are grown quite often as common garden plants in the Hawaiian Islands. Again in this group we find a large range of vegetative proportions, from dwarf clustered pseudo-bulbs less than an inch tall to some eighteen feet. Generally speaking , there are several groups fairly common in orchid collections. Probably the showiest is *D. nobile*- (no-BULL-lay) which are deciduous, dropping their leaves in the winter and sending flower buds from the nodes where the leaves have dropped. Another common group is the *Dendrobium phalaenopsis,* where the flower spikes form from the top of the cane-like growth. These usually retain their leaves. Then there are those that send out a drooping flower spike from the side of the pseudo-bulbs with large clusters of flowers on them.

ONCIDIUM Sw. (on-SID-e-um): This plant usually has small yellow blooms on a long arching spike with a great quantity of flowers per spike. There are other colors though none as common as the yellows. Their sizes range from small two and three inch plants with no pseudo-bulbs to plants with pseudo-bulbs as large as your fist. Once again this is a Western Hemisphere genus

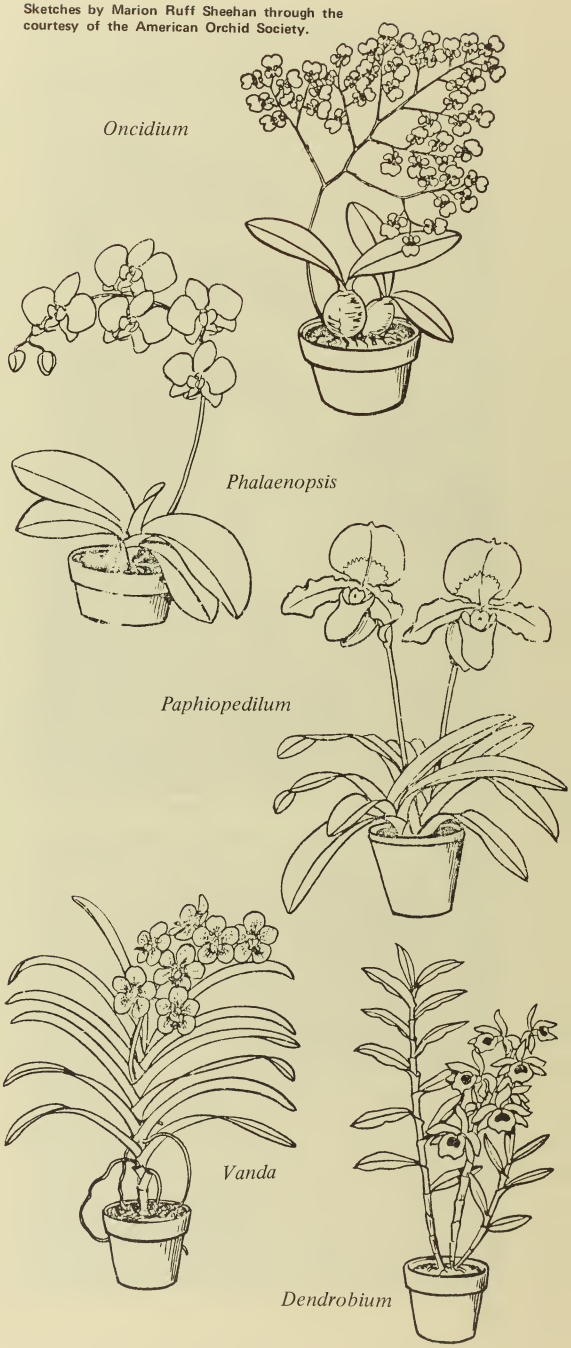
ranging from Florida, the Caribbean Islands, Mexico throughout all of tropical America on into Argentina. These easily grown plants are in most cases epiphytic. Rewarding springtime bloomers, they are often called "Dancing Lady" flowers because of their long large sprays and big flaring lip that gives the appearance of a large skirt swirlled outward in a fast dance.

PHALAENOPSIS Bl. (fail-i-NOP-sis): Often referred to as the "Moth Orchid" these beautiful gems come from the Far East, ranging from the Himalayas all through the Malay Peninsula, through Indo-China, the Indonesian Archipelago including New Guinea, to Formosa and the Philippine Islands, and the Queensland section of Australia. Those most often seen are the arching sprays of four inch white flowers and occasionally pinks and candy stripes. The hybridizers are still working to perfect yellow flowers. These plants have no pseudo-bulbs and are usually epiphytic.

PAPHIOPEDILUM Pfitz. (paf-fee-oh-PED-i-lum): Until just a few years ago these were called *Cypripedium* (and some of the old-timers still refer to them as cyps) but are more familiarly known as "Lady Slipper Orchids" because of their slipper-shaped pouch. The habitat of this group is almost identical to that of the *Phalaenopsis.* The true *Cypripedium* comes from North America and is often seen in the mountains of California and extensively through the northern regions of the Midwest and also in the New England states. The hybridizers have been working on this group for well over a hundred years and have now some very large flowers that shine like patent leather and look like wax or plastic flowers.

VANDA Jones (VAN-duh): The distribution of the species of this group overlays the identical area of the *Phalaenopsis* and *Paphiopedilums.* Probably the most familiar and popular *Vanda* is Miss Joaquim which was found in the garden of Miss Agnes Joaquim in Singapore in 1893. This plant is economically important both in Singapore and Hawaii, where it is harvested and sold by the pound. They are commonly used for making leis and anyone making a trip to the Islands surely must have seen acres under cultivation. They are also used extensively each year on the floats in the annual Rose Parade. There are three types of vegetative growths: terete, which are round leafed like a pencil; strap-leafed which are broad; and semi-terete which is a result of cross-breeding the two aforementioned types. Though they are naturally epiphytic they appear to be terrestrials when grown by the acre. Closer examination will reveal that their roots are not in the ground. □

Sketches by Marion Ruff Sheehan through the courtesy of the American Orchid Society.



GROWING BONSAI

—Part Two—

EDITOR'S NOTE: Part two of a two part article on bonsai. From U.S. Government/Department of Agriculture Home and Garden Bulletin No. 206.

AFTER CREATING your bonsai, you must be prepared to transplant it from either training pot or from the ground into a pot suitable to its dimensions. This move usually takes place at the end of the first year.

In transplanting, be sure to retain some of the original soil, and trim the roots if necessary. Cut away any abundant growth of new roots at the base of the trunk before repotting. If only a few roots have formed around the taproot, prune these roots slightly. Prune the taproot again at the end of the second year, and cut it short at the end of the third year. This final cutting should be done when new roots have appeared at the base.

Repotting of bonsai plants is usually needed becuase of the following reasons: soil insects have damaged the plants; the pot has broken; or the soil is in poor condition. Sometimes a poor soil condition can be corrected without repotting and disturbing the roots of the plant. This is done by adding new soil around the outer surface or by removing plugs of soil and replacing them with a free-draining soil mix. Remember that the health of trees grown as bonsai depends largely on the care of changing the soil in the pots and on the proper pruning of surface roots.

A healthy bonsai puts out new surface roots every year. The growth of these roots makes it difficult for vital water and air to penetrate the soil. The surface roots will be nourished but the main root near the trunk will die. Therefore, periodically cut back the main root and thin out the surface roots.

The rate of growth of your bonsai should determine the frequency of repotting. Pines and spruces, for example, need repotting only once every three to five years; flowering and fruiting trees, every year or—depending on the variety—every second year. Repot quick-growing species at least twice a year. These intervals apply to healthy trees that have received proper care.

Repotting is done in the early spring when the first new buds appear. A secondary season occurs in late summer or early autumn when, for a short time, the roots check their growth. It is dangerous to repot in late spring and early summer when the leaves are just open and still tender. When the tree is in a dormant state it is unable to establish itself in the new soil and root diseases are likely to develop. For this reason, bonsai must never be repotted in winter, except when kept in greenhouse culture.

Soil mixtures vary a great deal depending on geographical area and personal preferences. There are many conflicting ideas on the type of mix to use. Many growers find that bagged potting soil is satisfactory for potting bonsai. If you use bagged soils, make sure they contain sphagnum peat moss and coarse perlite in equal quantities. Bagged soils are available in most garden supply stores and nurseries.

Generally, mixing soil should have rapid drainage which is necessary to permit fine roots to develop. It also contains decaying humus and necessary mineral nutrients. It should be free from root rot and have a pH similar to the tree's native soil. Try to avoid high levels of dry fertilizers in the soil mix. Screen bagged soil to remove the fine clay particles.

A good basic mix consists of one-third clay, one-third humus, and one-third sand. If you live in an area where humus is not available, then obtaining an artificial soil mix from your garden store is the only answer. River or quarry sand can be purchaed from lumber yards and variety stores where it is sold under the name of white aquarium sand.

To maintain plant growth, use fertilizer to supply nutrients. Maintain the nutrient level in the soil mix throughout active growth with monthly applications of a diluted liquid fertilizer. Apply fertilizer only before and during active growth. For liquid fertilizer you can use a typical house-

plant fertilizer (20–20–20) diluted to one-quarter to one-half the strength on the label.

When watering your bonsai, water the entire plant (and soil) daily. If you skip even one day you can permanently damage the plant especially during drying summer conditions. Make sure your plants are located where rain can fall on them. However, plants should not remain wet or water-logged for long periods.

Bonsai from miniature forest trees must live outdoors all the time. They are brought into the house for short periods on special occasions. They will die if kept too long indoors, particularly in overheated rooms. Bonsai may be brought inside once or tiwce a week for two or three hours—during winter, spring, and autumn. They should not be brought inside during hot weather unless the room is well-ventilated.

Before you bring your bonsai indoors to display them, water them first and let them drain well. Wipe all dirt and dampness from the container. Bonsai look best placed in front of a plain wall on a raised stand. The Japanese display bonsai on a platform raised a few inches above the floor in one corner of the living area. Paintings and scrolls are hung against the wall at the back. Other objects, such as ceramic ware and flower arrangements, are grouped with bonsai on the platform.

If you set bonsai on a low stand or table, try using a small Japanese folding screen behind it. These stands can be purchased in oriental stores. It's a good idea to contrast the shape of the stand with the bonsai container; the height of the stand should harmonize with the height of the tree.

Display bonsai in the garden on simple shelves set on concrete blocks. Place the shelves against an outside wall away from trees, and protect them from the sun. Other good locations for bonsai are slat benches and decks, either in the garden or adjoining the house. Bonsai in large containers look better displayed alone. Place them on some kind of stand rather than setting them on the ground.

For continuing care of your bonsai, be certain to check "Now Is The Time" for bonsai in this issue and every issue of CALIFORNIA GARDEN MAGAZINE. □

Bonsai by Dr. Herbert Markowitz.
Photos by Betty Mackintosh.

now is the time

BEGONIAS

MARGARET LEE

✓ to clean up plants.
✓ to feed lightly.
✓ to spray for mildew and other pests.
✓ to water when needed.
✓ to protect from rains, down-drips and winds.
✓ to allow tuberous begonias to die-back; put them aside and let them rest; sprinkle occasionally.
✓ to put a top dressing of your favorite mulch around your plants.

BONSAI

HERB MARKOWITZ

✓ to prune black pines by cutting the candles about half length.
✓ to remove any leaves or fruits from deciduous trees.
✓ to keep deciduous trees protected from sudden changes in temperature.
✓ to watch water carefully—cooler weather decreases the need for as much water; deciduous trees require just enough to keep them from drying out.
✓ to protect trees from any freezing weather.

CACTUS & SUCCULENT

VERNA PASEK

✓ to repot root-bound plants.
✓ to keep moisture level up if Santa Ana winds occur.
✓ to make changes or re-locate collections for winter.
✓ to collect material for dish gardens for the holidays—a layer of gravel with some horticultural charcoal helps sweeten the potting soil.
✓ to guard against insects, snails, scale, etc.
✓ to protect new growth from any sun scald or winds.
✓ to give a low-nitrogen feeding.

CAMELLIAS

BENJAMIN BERRY

✓ to maintain a relatively high humidity.

CAMELLIAS *(continued)*

✓ to watch for Santa Ana conditions; water and mist only in the late afternoon.
✓ to maintain a regular spray program—particularly for looper worms.
✓ to dust chlorodane under and around base of plants for leaf beetles.
✓ to pick up all fallen blooms to avoid an infestation of petal blight.
✓ to use gibberelic acid if you desire to experiment with "gibbing".
✓ to continue feeding 2–10–10 or 0–10–10 fertilizer each month for better quality of blooms.
✓ to mulch with bark or pine needles to help retain moisture and shade the tender surface roots.
✓ to feed iron every two months to promote a healthy deep green.
✓ to groom and disbud for larger bloom—leave the buds that face downward to reduce rain damage to blooms.
✓ to select plants in bloom at local nurseries for new plantings.

DAHLIAS

ABE JANZEN

✓ to allow plants to go dormant by withholding water and food.
✓ to allow plants to dry brown; when brown about twelve inches from the ground, cut off stalks.
✓ to leave tubers in ground to harden off; lift roots before rains start.
✓ to wash clumps after digging and dry for a few hours before dividing; leave at least one eye in each division. Apply soil sulfur to any cut and store in vermiculite or other medium in a cool protected place. Be sure to tag all tubers for identification when planting.
✓ to check orders for new varieties or replacements of favorites.

EPIPHYLLUMS

GEORGE FRENCH

✓ to give a feeding before the first of December.
✓ to check for snails and slugs.
✓ to check and tie any long branches to prevent damage.
✓ to clean up any "ugly" looking plants; repot if needed.
✓ to check watering especially if there is heavy rains; not too much water at this time.

FERNS

RAY SODOMKA

✓ to continue to be alert for insects.
✓ to water—don't depend on rains to find your hidden plants.
✓ to fertilize with a more deleted mixture.
✓ to plant spores.
✓ to take the "pups" from the Platyceriums and mount them.
✓ to protect plants at night from frost; cover with newspaper or place in garage.

FUCHSIAS

WILLIAM SELBY

✓ to clean up plants—remove all dead leaves and other debris from pots, baskets and around ground plants.
✓ to STOP fertilizing—allow plants to rest.
✓ to water only to keep from drying out.
✓ to prune if you live in a frost-free area. Cuttings may be taken if good tip growth is available.
✓ to watch for insects in warmer areas.

GERANIUMS

PHIL BUSH

✓ to cut back one half (one side) of plant until new growth appears, then cut back other side. Never drastically cut your entire plant at one time.
✓ to feed very lightly.
✓ to water carefully—protect from too much rain.
✓ to bait for snails and slugs.
✓ to pinch for shape as new growth appears on some pot plants.
✓ to protect from frost if temperature falls below 28°.

IRIS

LERTON HOOKER

✓ to make final plantings of Bearded type, Spurias, Louisianas, and Siberians.

IRIS *(continued)*

✓ to move and replant Pacific Coast Natives *(Californicae)*; be sure new white roots are showing. This will probably be late in December. Water well until they are well established.
✓ to feed with liquid fertilizer of a higher nitrogen formula for better vegetative growth.
✓ to set up a good watering program. Louisianas and Japanese like a wet swamp-like condition. Spurias and other beardless like it damp but not swampy. Bearded Iris need alternate soaking and drying to force root growth.
✓ to keep beds clean of weeds and insects. Keep off old dead leaves—aphids can winter under these old leaves.
✓ to plant bulbous iris for spring bloom—Dutch, English and Spanish varieties can be planted in garden or pots.

ORCHIDS

LOIS DONAHUE

✓ to feed cymbidiums a 10—30—20 fertilizer.
✓ to keep snail bait out.
✓ to let deciduous dendrobiums go dormant for four to six weeks.
✓ to give light feedings to cyprepediums and phaleonopsis.
✓ to repot cattleyas that have outgrown their pots.
✓ to stake new cymbidium spikes carefully.
✓ to clean out dead leaves.
✓ to keep paphiopedilums MOIST, not dry out as reported before.

ROSES

SUE STREEPER

✓ to enjoy your end of season roses. Fall and early winter blooms can be some of the nicest flowers you'll get in San Diego.
✓ to encourage your roses to take a mid-winter rest. No fertilizing now and no hard pruning until mid-winter.
✓ to pick out poorest performers to be replaced during bare-root season. Give consideration to color compatibility.
✓ to prepare beds for new bare-root plantings.

VEGETABLES

GEORGE JAMES

✓ to start plants of Broccoli, Brussel Sprouts, Cabbage, Cauliflower, Celery, Lettuce—shorter days and lower temperatures make success speculative at this time.

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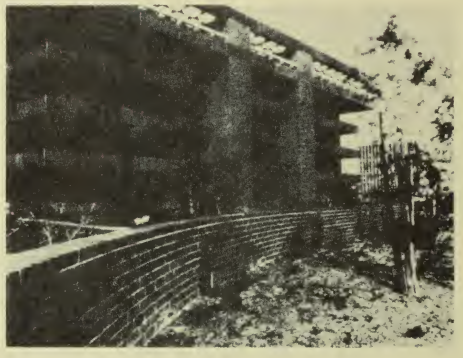

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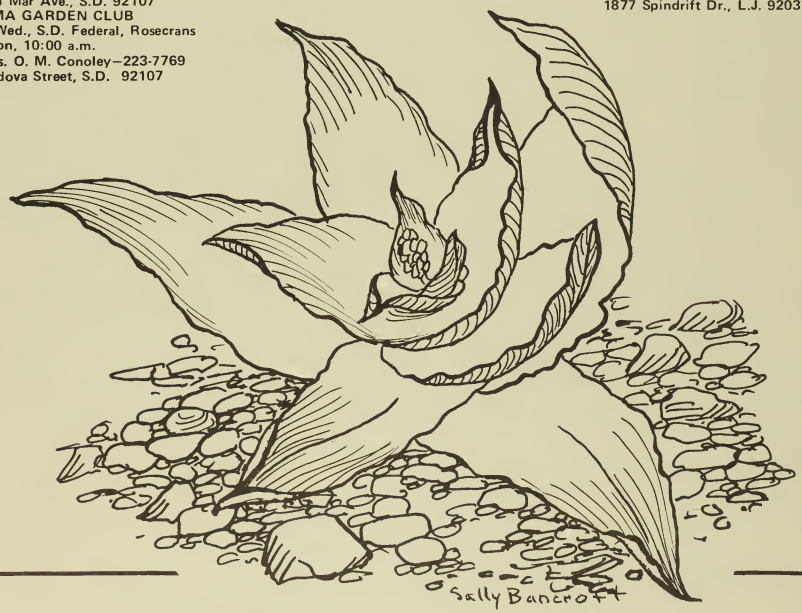

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casa del prado

dec. 5 6 7th

room 101 11-4:30 PM